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Three new diospiline species from Honduras (Hymenoptera: Braconidae: Helconinae: Diospilini)

J. PAPP

A b s t r a c t : PAPP J.: Three new diospiline species from Honduras (Hymenoptera: Braconidae: Helconinae: Diospilini). Three new diospiline species from Honduras: *Diospilus adustior* nov.sp., *Diospilus subfuscus* nov.sp. and *Topaldios subparallelus* nov.sp. are described. The nearest allies of the new species are discussed. In addition, the male of *Diospilus podobe* PAPP is described for the first time. The type material of the new species is deposited in Zoologisk Museum, Lund. With 32 original line-drawn figures.

K e y w o r d s : *Diospilus*, *Topaldios*, new species, description, taxonomic position.

Introduction

Through the kindness of Dr. R. Danielsson (Lund) I received a number of braconid / diospiline specimens, collected in Honduras, for examination. Its identification resulted the recognition of three new species which are described here. Two of the new species belong to the genus *Diospilus* HALIDAY 1833 (*D. adustior* nov.sp., *D. subfuscus* nov.sp.) and one new species to the genus *Topaldios* PAPP 1995 (*T. subparallelus* nov.sp.). The male form of *Diospilus podobe* PAPP 1995 is new to science, its description is presented.

Our knowledge on the diospiline species in the Neotropical Region is rather poor (SHARKEY 1997). Up to now eight species are known in this region (PAPP 1995): *Diospilus adustior* nov.sp. (Honduras), *D. curticaudis* GAHAN 1927 (Mexico, USA), *D. fulvus* PAPP 1995 (Costa Rica), *D. podobe* PAPP 1995 (Costa Rica, Honduras), *D. subfuscus* nov.sp. (Honduras) and *Topaldios apertus* PAPP 1995 (Argentina), *T. porrectus* PAPP 1995 (Argentina), *T. subparallelus* nov.sp. (Honduras).

Remarks: *Austrodolops eremita* BLANCHARD 1936 has been described from Argentina and was considered to be a diospiline species. However, MARSH (1997: 216) pointed out that "...previously included in Helconinae, is probably a junior synonym of *Allorhogas*, but the holotype needs to be studied before correct placement can be made." The genus *Allorhogas* GAHAN 1912 is a representative of the subfamily Doryctinae.

Description of the new species

In the descriptions the following abbreviations are applied (after van ACHTERBERG 1993: 4-5, Figs 15-18):

Forewing veins – *a* = second transverse anal vein, *m-cu* = transverse medio-cubital vein (or nervus recurrens), *r* = transverse radial vein, *r-m* = second transverse cubital vein, *1-Cu1* = first section of the discoidal vein, *1-M* = basal vein, *2A* = first transverse anal vein, *1-R1* = first section of the metacarpal vein, *2-R1* = second section of the metacarpal vein, *1-SR* = first section of the radial vein, *1-SR-M* = first section of the cubital vein, *2-SR* = first transverse cubital vein, *3-SR* = second section of the radial vein, *SRI* = third section of the radial vein, *CUIb* = apical section of the subdiscoidal vein.

Hindwing veins: *cu-a* = nervellus, *1-M* = second section of the median vein, *M + Cu* = first section of the median vein.

Eye – OOL = shortest distance between hind ocellus and compound eye, POL = shortest distance between hind two ocelli.

Surface sculpture terminologies after EADY (1968) and HARRIS (1979).

Structure terminologies after GAULD & BOLTON (1988: 58-74).

***Diospilus adustior* nov.sp. (Figs 1-7)**

Material examined: Male holotype: Honduras, Yoro, Palo de Comba, 15°11'N / 87°39'W, taken with Malaise trap in mid-elevation secondary forest, 31 August 1995, leg. R. Cave. Holotype is in good condition: glued on a pointed card by its right meso- and metapleuron.

Depository: Holotype is deposited in the Zoologisk Museum, Lund.

Etymology: The name "adustior" of the new species refers to the brown ground colour of the body.

Description of the male holotype: Body 2.1 mm long. Antenna as long as body and with 24 antennomeres. First flagellomere twice and penultimate flagellomere 1.8 times as long as broad, flagellum attenuating. Head in dorsal view transverse (Fig. 1), twice as broad as long, eye somewhat longer than temple, temple distinctly rounded, occiput weakly excavated. Temporal and hypostomal carinae meeting near to base of mandible (Fig. 2). Ocelli middle-sized, elliptic, OOL four times longer than POL. Eye in lateral view 1.5 times as high as wide, just wider than temple (15:14), temple somewhat narrowing ventrally (Fig. 3, see arrows). Malar space somewhat longer than basal width of mandible. Face 2.3 times as wide as high, inner margin of eyes parallel. Clypeus twice as wide below as high medially, pair of tentorial pits somewhat nearer to eye than to each other, lower margin of clypeus truncate (i.e. without denticles, cf. Fig. 15). Head polished, face with hair-punctures.

Mesosoma in lateral view 1.5 times as long as high, polished. Pronope invisible (head concealing pronotum due to the mounting position). Notaulix evenly deep, crenulated. Prepectal carina distinct. Precoxal suture fairly wide, crenulated. Areolation of propodeum distinct, areola basalis narrow, pair of spiracles latero-anteriorly (Fig. 4). Hind femur thick, 2.8 times as long as broad medially (Fig. 5). Hind tibial spurs short, as long as fourth tarsomere. Hind basitarsus somewhat shorter than tarsomeres 2-3 combined.

Forewing as long as body. Pterostigma (Fig. 6) less wide, 3.6 times as long as wide and issuing *r* proximally from its middle, *r* very short; *1-R1* reaching tip of wing, *2-R1* very short: 0.1 times as long as *1-R1*. Second submarginal cell narrow, i.e. *3-SR* 0.6 times as long as *r-m*, *2-SR* and *r-m* parallel, *SRI* faintly bent and five times as long *3-SR* (Fig. 6).

First discal cell relatively high, *l-m* twice as long as *m-cu*, *l-sr* indistinct, *l-sr-m* one-sixth shorter than *l-m*; first subdiscal cell distally closed (Fig. 6, see arrow).

First tergite broad, slightly (1.1 times) longer than broad posteriorly, twice broader behind than basally; pair of spiracles before middle of tergite, pair of basal keels near to lateral margin of tergite, hind part of tergite with fine striolation (Fig. 7). Tergites 2-3 equal in length, together with further tergites polished.

Scape and pedicel yellowish, flagellum brown. Head blackish brown, mesosoma dark brown, metasoma brown. Palps and mandible straw yellow. Clypeus brown, face dark brown. Tegula yellowish. Legs yellow, coxae and trochanters straw yellow, hind tibia entirely brown. Wings hyaline, pterostigma brown, venation light brown.

Female and host unknown.

Distribution: Honduras.

Taxonomic position: The new species, *Diospilus adustior*, is near to *D. podobe* PAPP by their dark body colour and broad first tergites (PAPP 1995: 106), the male of the two species are distinguished as follows:

- 1 (2) Head in dorsal view less transverse, 1.75 times as broad as long, eye somewhat shorter than temple (Fig. 8). First tergite somewhat broader posteriorly than long, 2.2 times broader behind than basally (Fig. 9). Propodeum: areola basalis wide, its carination as in Fig. 10. Hind femur 3.3 times as long as broad medially (Fig. 11). Forewing: pterostigma wide, 2.6 times as long as wide, *SR1* approaching tip of wing, *2-R1* long: 0.25 times as long as *l-r1* (Fig. 12). Antenna with 28 antennomeres. Head and mesosoma black. ♂: 3.7 mm. Costa Rica, Honduras *D. podobe* PAPP 1995
- 2 (1) Head in dorsal view transverse, twice as broad as long, eye somewhat longer than temple (Fig. 1). First tergite somewhat longer than broad posteriorly, nearly twice broader behind than basally (Fig. 7). Propodeum: areola basalis narrow, its carination as in Fig. 4). Hind femur 2.8 times as long as broad medially (Fig. 5). Forewing: pterostigma less wide, 3.6 times as long as wide, *SR1* reaching tip of wing, *2-R1* very short: 0.1 times as long as *l-r1* (Fig. 6). Antenna with 24 antennomeres. Head and mesosoma brown. ♂: 2.1 mm. Honduras..... *D. adustior* nov.sp.

The new species is also near to *D. subfuscus* nov.sp., the distinction of the two species is presented at this species.

***Diospilus podobe* PAPP, ♂ new (Figs 8-12)**

Diospilus podobe PAPP 1995: 106 ♀ type locality: Costa Rica, Surrubes, female holotype in Hungarian Natural History Museum (Department of Zoology), Budapest (No. 7686).

Material examined: 1 ♀, 1 ♂ Honduras, Cortés Parque Nacional Cusuco, 5 km N Buenos Aires, 15°29'N / 88°13'W, 1 ♂: 15 July 1995 and 1 ♀: 30 July 1995, leg. R. Cave.

The species was originally described on the basis of a single female specimen. A pair of specimens: one female and one male were caught in Honduras, they proved to represent the species in question. The male specimen is new to science, the female deviates from the holotype in a few features.

Description of the male: Similar to the female holotype. Body 3.3 mm long. Antenna with 28 antennomeres. Head in dorsal view 1.8 times as broad as long, temple somewhat longer than eye (Fig. 8). Forewing: pterostigma 2.6 times as long as wide (Fig. 12). Hind femur 3.3 times as long as broad medially (Fig. 11). Legs whitish to pale yellow.

Deviating features of the female: Body 3.2 mm long. Antenna with 29

antennomeres. Forewing: *r* short though distinct, 3-*SR* 0.8 times as long as 2-*SR*. Ovipositor sheath short, as long as hind tibia + basitarsus combined. Legs whitish to pale yellow.

Host unknown.

Distribution: Costa Rica, Honduras (new record).

***Diospilus subfuscus* nov.sp. (Figs 13-19)**

Material examined: Male holotype and one male paratype: Honduras, Fco. Morazan, San Antonio de Oriente Uyuca, 6 March 1997, leg. C. Hansson. Holotype is in good condition: glued on a pointed card by right side of mesosoma. Paratype is in fairly good condition: (1) glued like the holotype, (2) both flagelli apically deficient, (3) right hind femur invisible owing to the mounting, (4) head turned "backwards": position of oral organs towards mesosoma (owing to the mounting?).

Depository: Holotype is deposited in the Zoologisk Museum, Lund; paratype is in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 12022.

Etymology: The species name "subfuscus" of the new species refers to the blackish brown to brown corporal colour.

Description of the male holotype: Body 1.9 mm long. Antenna somewhat shorter than body and with 21 antennomeres. First flagellomere 2.4 times and penultimate flagellomere 1.6 times as long as broad, flagellum evenly thick. Head in dorsal view transverse (Fig. 13), 1.75 times as broad as long, eye slightly (18:16) longer than temple, temple rounded, occiput excavated. Temporal and hypostomal carinae meeting near to base of mandible (cf. Fig. 2). Ocelli small, elliptic, OOL 2.7 times as long as POL. Eye in lateral view 1.6 times as high as wide and as wide as temple on its upper part, temple slightly narrowing ventrally (Fig. 14, see arrows). Malar space somewhat shorter than basal width of mandible. Face 2.2 times as wide as high, inner margin of eyes parallel. Clypeus 1.7 times as wide below as high medially, pair of tentorial pits slightly nearer to eye than to each other, its lower margin truncate (i.e. without denticles, Fig. 15).

Mesosoma in lateral view 1.5 times as long as high, polished. Pronope distinct. Notaulix evenly deep, crenulated. Prepectal carina distinct. Precoxal suture also distinct, almost reaching hind margin of mesopleuron. Areolation of propodeum distinct, areola basalis wide, pair of spiracles latero-medially (Fig. 16). Hind femur 4.1 times as long as broad medially (Fig. 17). Hind tibial spurs short, as long as fourth tarsomere. Hind basitarsus as long as tarsomeres 2-3 combined.

Forewing slightly longer than body. Pterostigma (Fig. 18) wide, almost three times as long as wide and issuing *r* just proximally from its middle, *r* very short, 1-*R*1 as long as pterostigma and ending before tip of wing, 2-*R*1 long: nearly 0.4 times as long as 1-*R*1. Second submarginal cell narrow, i.e. 3-*SR* 0.6 times as long as *r-m*, 2-*SR* and *r-m* subparallel. *SR*1 faintly bent and six times as long as 3-*SR* (Fig. 18). First discoidal cell relatively less high, 1-*M* 1.8 times as long as *m-cu*, 1-*SR* missing, 1-*SR-M* 0.7 times as long as 1-*M*. First subdiscal cell distally somewhat open (Fig. 18, see arrow).

First tergite (Fig. 19) less broad, anteriorly parallel-sided and posteriorly broadening, 1.4 times as long as broad posteriorly, 1.7 times broader behind than basally; pair of basal

keels less distinct and posteriorly merging into striolations, pair of small spiracles before middle of tergite. Second tergite just longer than third tergite, border between them almost indistinct. Tergites beyond first tergite polished.

Antenna brown. Head black, mesosoma and first tergite blackish brown, metasoma brown. Palps and mandible pale yellow, clypeus brown. Tegula brown, parategula brownish yellow. Legs yellow, coxae + trochanters straw yellow, distal two-thirds of hind tibia brown. Wings subhyaline, pterostigma opaque brown, venation light brown.

Description of the male paratype: Similar to the male holotype. Body 2 mm long. Antenna with 22 antennomeres. Forewing: *1-R1* slightly shorter than length of pterostigma. First tergite almost 1.5 times as long as broad posteriorly. Hind femur 3.9 times as long as broad medially.

Female and host unknown.

Distribution: Honduras.

Taxonomic position: The new species, *Diospilus subfuscus*, is near to *D. podobe* PAPP (PAPP 1995: 106), the male of the two species are distinct by the following features:

- 1 (2) Forewing: pterostigma wide, 2.6 times as long as wide, *r* relatively short; second submarginal cell wide, *r-m* slightly longer than *3-SR*; *2-R1* short, 0.25 times as long as *1-R1*; first subdiscal cell distally closed (Fig. 12, see arrows). First tergite evenly broadening posteriorly, just broader posteriorly than long, longitudinally sculptured (Fig. 9). Propodeum: areola basalis less wide, its carination as in Fig. 10. Hind femur 3.3 times as long as broad (Fig. 11). Antenna with 28 antennomeres. Head, mesosoma and first tergite black, metasoma dark brown; legs pale yellow, hind tibia + tarsus light brownish. ♂: 3.7 mm. Costa Rica, Honduras *D. podobe* PAPP 1995
- 2 (1) Forewing: pterostigma less wide, three times as long as wide, *r* relatively long; second submarginal cell less wide, *r-m* 1.6 times as long as *3-SR*; *2-R1* long, 0.37 times as long as *1-R1*; first subdiscal cell distally open (Fig. 18, see arrow). First tergite less broadening posteriorly, 1.4 times as long as broad posteriorly, striolated (Fig. 19). Propodeum: areola basalis wide, its carination as in Fig. 16. Hind femur 4.1 times as long as broad (Fig. 17). Antenna with 21-22 antennomeres. Head black, mesosoma and first tergite blackish brown, metasoma brown; legs yellow, hind tibia + tarsus brownish. ♂: 1.9-2 mm. Honduras *D. subfuscus* nov.sp.

The new species is also near to *D. adustior* nov.sp., the males of the two species are distinguished by the features keyed:

- 1 (2) Forewing: *SR1* reaching tip of wing, *2-R1* very short: 0.1 times as long as *1-R1* (Fig. 6). Propodeum: areola basalis narrow (Fig. 4). First tergite relatively more broadening posteriorly, slightly (1.1 times) longer than broad posteriorly (Fig. 7). Hind femur fairly thick, 2.8 times as long as broad (Fig. 5). Temple in dorsal view slightly more rounded (Fig. 1). Face hairpunctured. Hind tibia entirely brown. ♂: 2.1 mm. Honduras *D. adustior* nov.sp.
- 2 (1) Forewing: *SR1* ending before tip of wing, *2-R1* long: nearly 0.4 times as long as *1-R1* (Fig. 18). Propodeum: areola basalis wide (Fig. 16). First tergite relatively less broadening posteriorly, 1.4 times as long as broad posteriorly (Fig. 19). Hind femur fairly thin, 4.1 times as long as broad (Fig. 17). Temple in dorsal view slightly less rounded (Fig. 13). Face polished. Hind tibia distally brown. ♂: 2 mm. Honduras *D. subfuscus* nov.sp.

***Topaldios subparallelus* nov.sp. (Figs 20-22, 25-28)**

Material examined (4♀, 1♂): Female holotype and three female + one male paratypes: Honduras, Cortés, Parque Nacional Cusuco, 5 km N Buenos Aires, 15°29'N / 88°13'W, taken with Malaise trap "in oak / pine forest", female holotype + one female paratype: 15 August 1995, one female + one male paratypes: 30 July 1995, one female paratype: 30 August 1995, leg. R. Cave. – Condition of the types are good. Holotype: glued on a pointed card by its right meso- and metapleuron. Three female and one male paratypes: glued like the holotype, one female (collected 30 August 1995): left flagellum apically deficient (i.e. with 19 flagellomeres).

Depository: Female holotype and two female + one male paratypes are deposited in the Zoologisk Museum, Lund; one female paratype in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 12023.

Etymology: The species name "subparallelus" of the new species refers to the weakly broadening first tergite (Fig. 28).

Description of the female holotype: Body 3.2 mm long. Antenna somewhat longer than body and with 26 antennomeres. First flagellomere 2.5 times, further flagellomeres shortening and attenuating so that penultimate flagellomere 1.8 times as long as broad. Head in dorsal view transverse (Fig. 20). twice as broad as long, eye slightly protruding and 1.3 times as long as temple, temple receded, occiput weakly excavated. Ocelli middle-sized, elliptic, near to each other. Eye in lateral view nearly round (Fig. 21), 1.3 times as high as wide, slightly wider than temple, temporal and occipital carina strong. Malar space a bit longer than basal width of mandible. Face twice as wide as high, inner margin of eyes parallel. Clypeus 3.3 times as wide as high, its ventral margin truncate. Distance between tentorial pits one-third longer than distance between pit and lowest point of eye. Head polished, face medially rugose.

Mesosoma in lateral view 1.5 times as long as high, polished. Pronope present, medially divided by a keel. Notaulix distinct, evenly deep, crenulated. Prepectal carina distinct. Precoxal suture crenulated, margin of mesopleuron also crenulated. Propodeum: areola basalis distinct, areolae smooth, at most rugulose-uneven, pair of spiracles latero-medially (Fig. 25). Hind femur thin, five times as long as broad distally (Fig. 22). Hind pair of spurs short, shorter than fourth tarsomere. Basitarsus of hind leg as long as tarsomeres 2-3 combined.

Forewing as long as body. Pterostigma (Fig. 26) 3.6 times as long as wide and issuing *r* from its middle, *r* somewhat shorter than half width of pterostigma. Second submarginal cell fairly large, 2-SR 1.3 times as long as *r-m*, 3-SR somewhat shorter than *r-m* and 0.6 times as long as 2-SR; SR1 straight, almost five times as long as 3-SR and reaching tip of wing. 2-R1 short, somewhat longer than *r* and 1-R1 1.5 times as long as pterostigma. 1-SR (or petiole) of first discal cell short, 1-M twice as long as *m-cu* and 1.6 times as long as 1-SR-M; 1-Cu1 short, *m-cu* antefurcal (Fig. 26). First subdiscal cell distally just open, i.e. CUIb almost missing (Fig. 26, see arrow). First and second anal veins (2A and a) present. Hind wing: *M + Cu* 1.5 times as long as 1-M, *cu-a* straight (Fig. 27).

First tergite (Fig. 28) long, less broadening posteriorly: 1.5 times as long as posteriorly, pair of spiracles before middle of tergite, pair of basal carinae short, scutum longitudinally rugo-rugulose. Tergites 2-3 transverse, third tergite somewhat longer than second tergite, together with further tergites polished. Ovipositor sheath long, as long as hind tibia + basitarsus combined.

Scape and pedicel brown, flagellum dark brown. Head, mesosoma and first tergite black,

metasoma brown. Oral organs pale yellow. Tegula yellow. Mesoscutum with brownish suffusion. Coxae and trochanters whitish yellow, legs 1-2 brownish yellow, hind leg brown. Wings subhyaline, pterostigma and veins light brown.

Description of the three female paratypes: Similar to the female holotype. Body 2.9-3 mm long. Antenna with 25 antennomeres. Head in dorsal view 2-2.2 times as broad as long. Forewing: *r-m* 1.3 times as long as *3-SR* (1 ♀). Hind femur 4.5 times as long as broad distally (1 ♀). First tergite 1.7 times as long as broad posteriorly (1 ♀). Mesosoma dorsally with brownish suffusion. (1 ♀).

Description of the male paratype: Similar to the female. Body 4 mm long. Antenna with 29 antennomeres. Head in dorsal view 2.1 times as broad as long. Hind femur 4.5 times as long as broad distally. First tergite 1.5 times as long as broad behind. Head and mesosoma black, tegula brown.

Host unknown.

Distribution: Honduras.

Taxonomic position: The new species, *Topaldios subparallelus*, is nearest to *T. porrectus* PAPP (PAPP 1995: 111), the two species are distinguished by the following features:

- 1 (2) Female: first tergite somewhat broader behind than long (Fig. 29), male: first tergite one-sixth longer than broad posteriorly (Fig. 30). Temple in dorsal view rounded (Fig. 23). Propodeum: *areola basalis* wide, its carination as in Fig. 31. Forewing: pterostigma issuing *r* clearly distally from its middle; *1-M* (of discal cell) short, 0.7 times as long as *1-SR-M*; first subdiscal cell distally closed (see arrow in Fig. 32); *1-R1* approaching tip of wing, *2-R1* somewhat longer than *r* (Fig. 32). Hind femur thick, 3.3 times as long as broad (Fig. 24). Legs reddish yellow. ♀: 4.5 mm, ♂: 4-4.5 mm. Argentina *T. porrectus* PAPP 1995
- 2 (1) Female and male: first tergite 1.5 times as long as broad posteriorly (Fig. 28). Temple in dorsal view receded (Fig. 20). Propodeum: *areola basalis* less wide, its carination as in Fig. 25. Forewing: pterostigma issuing *r* from its middle; *1-M* (of discal cell) long, 1.6 times as long as *1-SR-M*; first subdiscal cell distally just open (see arrow in Fig. 26); *1-R1* reaching tip of wing, *2-R1* clearly shorter than *r* (Fig. 26). Hind femur five times as long as broad (Fig. 22). Legs brownish yellow, coxae + trochanters 1-2 whitish. ♀: 2.9-3.2 mm, ♂: 4 mm. Honduras *T. subparallelus* nov.sp.

Acknowledgement

My sincere thank should go to Dr. Roy DANIELSSON (Zoologisk Museum, Lund), who was kind enough to make available the elaboration of the diospiline material collected in Honduras and herewith treated.

Zusammenfassung

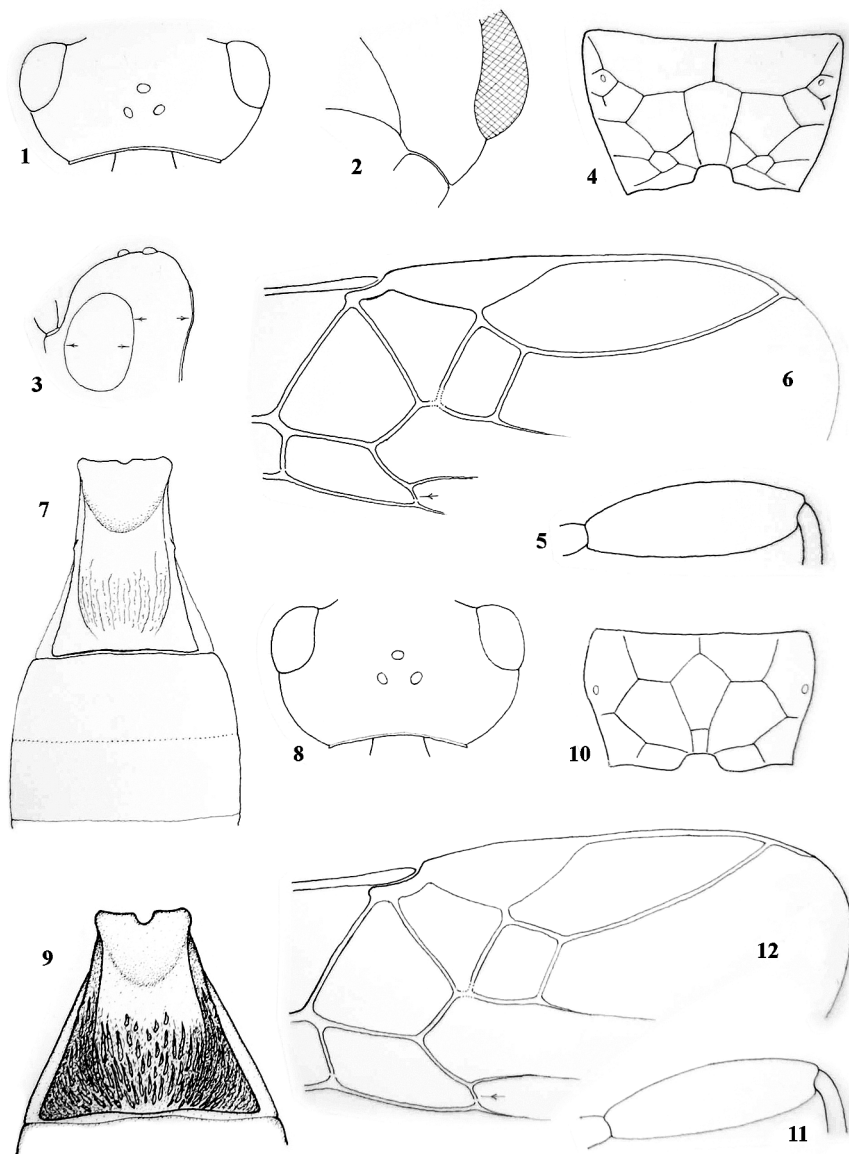
Drei neue Brackwespen der Tribus Diospilini (Hymenoptera: Braconidae: Helconinae: Diospilini) aus Honduras wurden in vorliegender Arbeit beschrieben und grafisch illustriert: *Diospilus adustior* nov.sp., *Diospilus subfuscus* nov.sp. und *Topaldios subparallelus* nov.sp. Differenzialdiagnostische Angaben zur Abgrenzung von verwandten Arten wurden in kurzen Bestimmungstabellen vorgestellt. Das Männchen von *Diospilus podobe* PAPP konnte zudem erstmals beschrieben werden. Das Typenmaterial zu den neuen Arten ist im Zoologischen Museum in Lund aufbewahrt.

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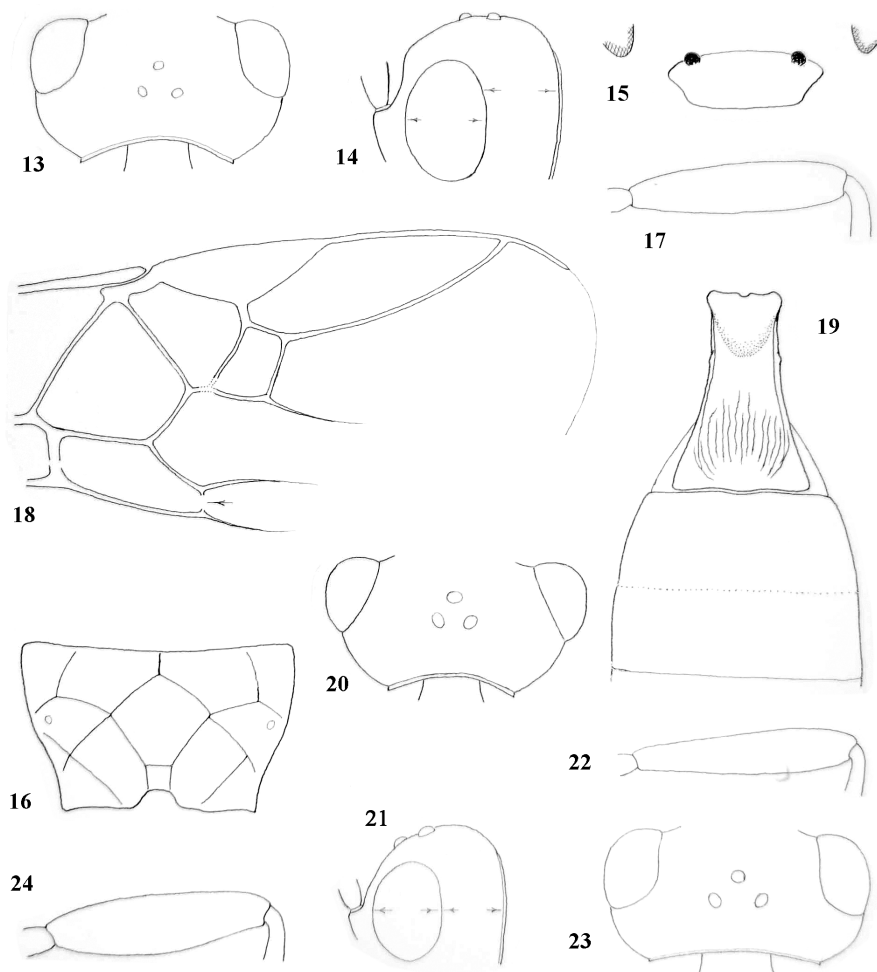
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Author's address:

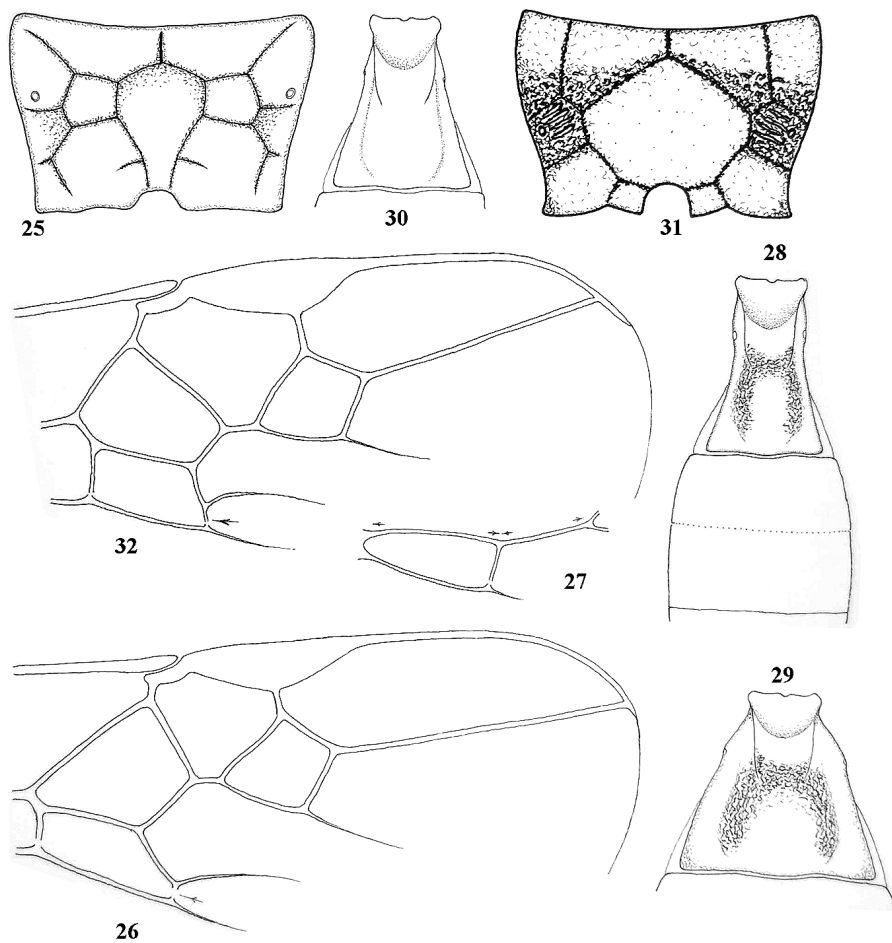
Jenő PAPP
Department of Zoology
Hungarian Natural History Museum, Pf. 137
H-1431 Budapest, Hungary
E-mail: j.papp1933@gmail.com



Figs 1-7: *Dirosipilus adustior* nov.sp.: (1) head in dorsal view, (2) hind ventral view of head, (3) head in lateral view, (4) propodeum, (5) hind femur, (6) distal part of right forewing, (7) tergites 1-3. **Figs 8-12:** *Dirosipilus podobe* PAPP: (8) head in dorsal view, (9) first tergite, (10) propodeum, (11) hind femur, (12) distal part of right forewing.



Figs 13-19. *Diospilus subfuscus* nov.sp.: (13) head in dorsal view, (14) head in lateral view, (15) clypeus in frontal view, (16) propodeum, (17) hind femur, (18) distal part of right forewing, (19) tergites 1-3. **Figs 20-22.** *Topaldios subparallelus* nov.sp.: (20) head in dorsal view, (21) head in lateral view, (22) hind femur. **Figs 23-24.** *Topaldios porrectus* PAPP: (23) head in dorsal view, (24) hind femur.



Figs 25-28. *Topaldios subparallelus* nov.sp.: (25) propodeum, (26) distal part of right forewing, (27) proximal part of right hind wing, (28) tergites 1-3. **Figs 29-32:** *Topaldios porrectus* PAPP: (29) first tergite of female, (30) first tergite of male, (31) propodeum, (32) distal part of right forewing.